MINUTES

MONTHLY TRACKING MEETING
Environmental Actions At
Naval Air Station (NAS) Alameda

Date: **March 25, 1997, Tuesday**
Time: **9:00 a.m. - 12 noon**
Place: **Building 1, NAS Alameda, Alameda, California**

Opening: **Administrative**

Summary: The tracking meeting started at approximately 9:26 a.m. Attachment A lists meeting attendees, and Attachment B is a copy of the meeting agenda distributed on March 21, 1997. The minutes for the February 18, 1997 tracking meeting were approved with no revisions. Teresa Bernhard said that Camille Garibaldi, George Kikugawa, and Dennis Wong would not attend and that she would distribute and discuss their project manager reports.

Item: **Remedial Project Manager Reports**

Summary: Navy remedial project managers distributed their monthly project summary sheets (see Attachment C). Only those items discussed are summarized below.

Ecological Assessment
Three attempts to gather invertebrate tissue samples were made, however only 6 grams of the required 50 grams were collected. Herring were discovered during sampling and it is believed that herring eggs may have been flushed through the rip-rap barrier. One of the fishes was sent to the California Division of Fish and Game to be used in a research project.

The Base Realignment and Closure Cleanup Plan (BCP)
The BCP is complete and has been distributed. BCP cover sheets were distributed at the meeting and Marie Rainwater will distribute the cover sheets to restoration advisory board (RAB) members at the next RAB meeting. Any additional BCP updates must be completed by Engineering Field Activity (EFA) West personnel. Several significant changes at NAS Alameda resulted in the decision to update the current BCP. Significant changes are also expected in the coming year, including base closure and the environmental baseline survey. Cost savings is the reason for requiring that future BCP updates be completed inhouse. The Navy expects that only an extended business plan will be completed in lieu of another BCP update.

Applicable or Relevant and Appropriate Requirements (ARAR)
The Navy has sent a response to the Department of Toxic Substances Control's (DTSC) letter regarding ARARs, and the DTSC has received the Navy's letter.

Master Schedules
The DTSC and the U.S. Environmental Protection Agency (EPA) will be submitting comments soon so that the schedules can be completed.

Characterization and Treatability Study for Intrinsic Bioremediation Assessment at Sites 4 and 5
The Navy has forwarded the draft final work plan to DTSC, EPA, and the Regional Water Quality Control Board (RWQCB). The Navy said that PRC Environmental Management, Inc. is ready to mobilize at Sites 4 and 5, and most of the analyses will be completed in the field. The data will be given to the Berkeley Environmental Restoration Center (BERC) for use in developing the conceptual site model, which will in turn be used with the feasibility study for evaluating intrinsic bioremediation of chlorinated hydrocarbons.

Upland Treatment of Sediments
The Navy stated that bioremdiation, possibly using mustard plants, is one alternative to treating sediment hot spots. The amount of soil to be treated will be less than five cubic yards, and will be fully contained and placed on the runway area.

Rice University - Funnel and Gate Demonstration
The project resulted in some excess iron shavings (excess amounts not needed for the demonstration) that the University of Waterloo will be giving to East Bay Municipal Utilities District (EBMUD). The Navy is waiting on the analytical results for the soil piles at the site for disposal characterization. EBMUD may take 2 to 8 weeks to permit the water generated from the demonstration. The water requires an additional permit because it is groundwater and may not be covered under the current Industrial Wastewater Treatment Plant (IWTP) permit. The Navy has written a letter explaining the circumstance, but EBMUD has indicated that the IWTP is not permitted to treat groundwater. Ray Maxwell is currently working with EBMUD to address the issue of water disposal. The Navy stated that each additional permit fee is $2,500. RAB member Karen Hack expressed concern that the fence could be blown down and soil piles exposed from under the plastic tarps. The Navy said the fence has been repaired and that a graduate student is in charge of maintaining the soil piles. The Navy will confirm that the site is monitored.

Resolution Resources - 3-D Seismic Profiling Demonstration
The Navy distributed to DTSC, EPA, and RWQCB the Draft Sampling and Analysis Plan. The Navy estimates that additional field work will begin in mid-April.

Storm Drain Sediment Removal Action
The storm drain cleaning was completed and the wastewater will be disposed of after an EBMUD permit is obtained.

EFA West Reorganization
The Navy announced that NAS Alameda Remedial Project Managers (RPM) Camille Garibaldi, Teresa Bernhard, and Ken Spielman will become part of a Regional Specialty Support Team and will no longer be NAS Alameda RPMs. The transition is scheduled to take place this summer. Ms. Garibaldi will remain in her position until a replacement is found. The Navy project teams

will be reorganized to integrate environmental programs at the East Bay installations. The NAS Alameda project team will be incorporated into an East Bay Project team.

EBS Project Status
The Navy reported that it has developed 10 schedules for findings of suitability to transfer (FOST) depending on the parcel groupings or particular scenarios.

The draft Phase II A/B Data Summary Reports (without running the tiered screening) are targeted to be completed by the end of May 1997. The Navy said that it is taking into consideration comments on the marsh crust and will conduct a literature search and record search. The marsh crust document is not in the RAB library because it is preliminary report. The Navy will incorporate agency comments and release the information in the data summary reports. It was acknowledged that anything released to the DTSC not marked "confidential" is considered public information. EPA will clarify EPA policies regarding public access to documents. The Navy will clarify with Navy counsel the policy on releasing secondary documents to the public. The Navy will give six copies of the Human Health Risk-based Tiered Screening Methodology document to the RAB as soon as it is final.

It was noted that the information repository at the Alameda City Library is missing several documents. The Navy stated that it cost approximately $5,000 to update the library 6 months ago.

Item: **Community Relations, Compliance Programs: Other Activities**

Summary: Community Relations

PRC will initiate a newsletter incorporating questions and comments received in response to a fact sheet mailing more than 2 years ago. In addition, an open house is planned for summer.

New RAB Members
The Navy and RAB members will conduct a site tour and orientation for new RAB members on March 28, 1997, from 4:00 p.m. to 7:00 p.m. The Alameda Reuse and Redevelopment Authority will give a presentation at the orientation.

Underground Storage Tank (UST)
The Navy said that a UST, believed to have stored solvents, was discovered near the flag pole at Site 5. The tank capacity is believed to be less than 10,000 gallons. Ms. Bernhard said she checked with the UST program and there is no funding in place to remove the tank since there has been no verification within the program that the tank exists. The Navy has no reason to believe the tank has leaked. Ms. Bernhard suggested that the tank be removed under management of the UST program and be funded by the Installation Restoration (IR) program. The Navy estimates the removal would produce 40 to 50 cubic yards of soil which would be removed as soon as possible after the tank removal. The Navy estimated the 2 weeks to submit a letter to the agencies and the Alameda Administrative Record, 30 days to draft the work plan, and 1 week to remove the tank. The Navy noted that keeping the tank removal in the UST program will expedite the process. DTSC said that only a work plan is needed which is the same as a removal action memorandum.

BCT agreed that keeping the removal in the UST program and using IR program funding is appropriate. The Navy noted that the workplan review period would need to be quick and DTSC agreed. Mr. Lanphar said he would call Ms. Bernhard at 1:00 p.m. on March 26, 1997 to further discuss the process.

Bay Area Defense and Conversion Action Team (BADCAT)
Rich Faris, Carla Jenkins, and Amber Evans presented information on the BADCAT program (see Attachment C). The BADCAT program was created to enhance the use of innovative technologies to foster accelerated cleanup at BRAC installations. The BCT was given a questionnaire to complete regarding activities at NAS Alameda. The BADCAT team is soliciting feedback from all the bay area BRAC installation teams. EPA expressed that a chief concern at NAS Alameda is landfill capping near surface water with sensitive wildlife. Ms. Evans said the same issue had been raised at Hunters Point Annex. The BADCAT team said that Ms. Garibaldi returned a questionnaire and indicated that chief concerns at NAS Alameda include chromium in soil beneath the plating shop at Site 4 and 5, chlorinated solvents in groundwater, and contaminated sediments at outfall locations. The BCT and project team agreed that these are priority concerns. The new address for BADCAT is:

2201 Broadway Suite 303
Oakland, CA 94102
(510) 628-8330
Fax: (510) 628-8338

Item: **Closure/Action Items Summary**

Summary: Action items from the meeting include:

- EPA will clarify its policy on public access to documents submitted to the agency from the Navy
- Mr. Edde will confirm Navy policy on public access to secondary or non-IR documents
- Navy will provide Ms. Hack with six copies of the Final Tiered Screening Methodology Document to be distributed to the RAB, and an additional copy for the information repository
- Mr. Lanphar will call Ms. Bernhard at 1:00 p.m. on March 26, 1997 to further discuss the storage tank removal
- Ken Spielman will provide Mr. Edde a schedule for the funnel and gate technology demonstration

Actions: Key dates and actions summarized below are found on each of the project summary handouts. The next ***tracking meeting*** will be held on ***Wednesday, April 29, 1997***, at NAS Alameda, from 9 a.m. to noon.

April 1, 1997 RAB Meeting, Paden Elementary School, Alameda, 7 p.m.

April 23, 1997 Sector 2, EBS/FOSL final signatures
April 25, 1997 ***NAS Alameda formal base closure ceremonies***
April 29, 1997 Tracking Meeting, NAS Alameda, 9 a.m.

May 6, 1997 RAB Meeting, Paden Elementary School, Alameda, 7 p.m.
May 13, 1997 Tentative date for discussion of Environmental Program schedules/overlap

Attachment A

ATTENDANCE LIST

Name	Organization	Phone
Karen Hack	RAB	(415) 495-1786
Teresa Bernhard	EFA West	(415) 244-2596
Lynn Suer	RWQ&B	(510) 286-4268
Anna-Marie Cook	USEPA	(415) 744-2367
Ken Spielman	EFA West	(415) 244-2539
Tom Lanphar	DTSC	(510) 540-3809
Steve Edde	BEC	(510) 263-3706 x12
Ann Klimek	EFA West	(415) 244-2714
James A. Ricks, Jr.	USEPA	(415) 744-2402
Marie Rainwater	PRC EMI	(415) 222-8279

Attachment B

March 25, 1997 Agenda
Monthly Tracking Meeting
NAS Alameda

AGENDA

MONTHLY TRACKING MEETING
Environmental Actions at
NAS ALAMEDA

Date: **March 25, 1997, Tuesday**
Time: **9:00 a.m. - 12 noon**
Place: **Building 1, NAS Alameda, Alameda, California**

Time	Topic	**	Leader	Pre Reading	Desired Outcome
9:00-9:15	Previous Meeting Minutes	D	*BRAC Cleanup Team*	Minutes from February meeting	Administrative/Approval of Previous Meeting Minutes
9:15-9:30	Site 5 UST, Background for NAS Alameda, TPH clean up levels, master schedule.	I	*Teresa Bernhard*	master schedule delivered at February meeting	review current actions/determine action items
9:30-9:45	UCB treatability studies, Lockheed Martin Site 5 demonstration, and the University of Waterloo Site 1 demonstration project.	I	*Ken Spielman*	none	review current actions/determine action items
9:45-10:00	Site 15/16, and status of radiological surveys	I	*George Kikugawa*	none	review current actions/determine action items
10:00-10:15	Site 18 removal action	I	*Dennis Wong*	none	review current actions/determine action items
10:15-10:30	Human health tiered screening, GIS/database, and schedules	I	*Ann Klimek*	none	review current actions/determine action items

10:30-11:00	Community Relations , Compliance Programs; Other Activities	I	*NAS Alameda/EFA West*	none	review current actions/determine action items
11:00-11:30	Action Item Summary	I	*BCT/Navy*	none	Confirm key action dates for individual actions and revisit prioritization, key deadlines, and required follow-up actions. Identify appropriate action items and assign individuals target objectives and action due dates.
11:30-12:00	Environmental Technology Needs Survey	C	*BADCAT*	none	Discussion/input on environmental technology needs for NAS Alameda.

** D = Decision/Discussion, I = Informational, C = Discussion/Input

Meeting Notes and Actions:

Attachment C

March 25, 1997 Project Status Sheets
Monthly Tracking Meeting
NAS Alameda

Subject to change

NAS Alameda Project Status and Update

Delivery Order/ CTO #	Description	Status	Agency Target Date	Comments due to Navy by	Comments
	RI/FS COMPONENTS				
107/13/ 14	Ecological Assessment		TBA		Basewide Eco Assessment will evaluate both terrestrial and aquatic receptors
	Aquatic (OU4)				
	Revised OU4 EA Report	responding to comments	4/21/97		
	OU4 Follow On Workplan	responding to comments	4/21/97		
	Field Work	85% complete			Three attempts to gather adequate invertebrate tissue were made, however only 6 grams of the required 50 grams was collected. The analytical evaluations were reduced to Hg, DDT, PCBs and pesticides. 60-90 for the return of the data.
	Terrestrial (OU 1,2,3)	ongoing	TBA		The development of COPCs for terrestrial eco receptors is based on terrestrial background.
316	Human Health Risk Assessment				
316 022	Background	ongoing	3/27/97		The 80/95, the outlier tests and the revised tables will be sent by 3/27/97.
316	TPH Technical Memo	ongoing	4/26/97	5/26/97	The Navy is working on a technical memorandum to evaluate the multiple criteria required for closure of petroleum type sites
020	BCP	complete			Revised cover sheets will be provided. Please confirm at the RAB that everyone received their copy of the BCP. Next years BCP will most likely be done in house.
057	Commercial Treatabiltiy Studies	pre scoping	TBA	TBA	While a proposal for technologies has not been developed, Electrokinetics is a possible technology. Please see Ken Spielman
	ARAR	ongoing			Navy has sent a response to the State's letter. TOM RECIEVED
282	MASTER SCHEDULE	ongoing	5/21/96	living document	A request for written comments due March 26, 1997 was made last month. No comments have been received. An IR pre schedules meeting should be held to discuss the written comments and to prepare for the joint EBS/IR schedules meeting in May.

Teresa Bernhard
work: 415-244-2596
fax: 415-244-2654

NAS ALAMEDA IRP PROJECT STATUS
(Ken Spielman, RPM)

Site / Contractor	Description	Status	Agency Target Date	Agency Comments Due	Comments / Upcoming Meetings
UCB					
DO #4	**Sediments Characterization & Treatability Study**				Characterization of sediments in Seaplane Lagoon and West Beach Landfill Wetlands. Acoustic profiling of lagoon and offshore of landfills complete. Preliminary identification of sediment layers.
	Draft Final Work Plan	Submitted	3/25/97	N/A	Response to comments included in draft final. **HIGHLIGHT: Field mobilization for Seaplane Lagoon sampling 4/21.**
	Draft Final Report		3/1/98	4/1/98	
DO #5	**Intrinsic Bioremediation Assessment**				Assessment of bioremediation at Sites 3 and 13. Field work complete. Lab work continues with analyses of soil, soil gas and groundwater.
	Draft Final Report	In field	6/4/97	7/4/97	
DO #7	**Natural Attenuation of Chlorinated Hydrocarbons**	Awarded			**HIGHLIGHT: Assessment of natural attenuation of chlorinated hydrocarbons at Sites 4 and 5. BERC using AFCEE guidance document.**
PRC	Preliminary Site Assessment Work Plan	Submitted	3/25/97	N/A	PRC will conduct site assessments under CTO 107 mod. Work plan provided to agencies for information, no formal review.
	Draft Work Plan		5/29/97	6/30/97	
DO #8	Upland Treatment of Sediments	To be scoped			Phytoremediation of Seaplane Lagoon sediments placed on runway. grow plants - possibility of hot spot treaments near the outfalls. which can't be treated in situ
Site 5	**Electrokinetics Demonstration**				Process to remediate chromium contaminated soils at Site 5 plating shop. PRC has completed site prep and well installation. **HIGHLIGHT: Demonstration will be contracted as a PRC treatability study.**
PRC	Draft Report	On hold			PRC evaluating technology.
Site 1	**Rice University - Funnel and Gate Demonstration**				University of Waterloo's Iron Curtain plus additional in-situ treatment of solvents and BTEX in groundwater at Site 1 Landfill.
	Final Work Plan	Submitted	N/A	N/A	Testing of treatment gate continues. Disposal of soil, water and excess iron is being arranged.
	Draft Report		8/1/97	9/1/97	

Site 5	**Resolution Resources - 3-D Seismic Profiling Demonstration**				High resolution 3-D seismic reflection imaging of the subsurface may detect DNAPL contaminants. NFESC oversight. **HIGHLIGHT: Verification sampling to be conducted in Spring 97.**
	Draft Sampling and Analysis Plan	Submitted	3/25/97	4/8/97	Verification sampling plan for six potential DNAPL locations. Agency review period 2 weeks.
Site 5	**GEHM Environmental - Electromagnetic Subsurface Survey Demonstration**				Electromagnetic induction technique which measures resistivity variation in subsurface and may detect DNAPL contaminants. NFESC oversight. Verification sampling will follow survey.
	Draft Work Plan	Being prepared	4/15/97	4/29/97	Agency review period 2 weeks.

NAS ALAMEDA EBS PROJECT STATUS AS OF 3/24/97

(EIC: Ann Klimek)

Contract/ Consultant	Description	Status	Target Date	Agency Comment Date	Agency Meeting Date	Comments
CTO 28	**BASEWIDE EBS**					
PRC	Human Health Tiered Screening	In Progress. Agencies reviewed Draft Final document. Final document to be completed with revisions to 12/12/96 Final document.	Was 5/31/96, Final completed 12/12/96	Completed 10/21/96	-	Finalized document and response to agency comments to be completed 12/12/96. Issue elevated to management level. Revision to Final document is anticipated.
	Sector EBS/FOSL	In Progress.	4/25/97	Draft 3/17/97, Draft Final FOSL 4/11/97.	Meeting: 4/2/97.	Looks good for. Toxicologist from agency 3/31 draft letter response
	Utilities Disclosure	In Progress.	3/28/97	-	-	
	Basewide EBS	In Progress.	4/25/97	-	-	Anticipated completion 4/25/97 with completion of the EBS Sectors.
	GIS/Database	In Progress. Addressing QA/QC issues and primary sources.	5/30/97	-	-	QA/QC check revealed data input problems. Anticipated delay until 5/97.
	FOST/Transfer Property	In Progress. Basewide EBS and Human Health Risk Screening will be used to support decisions for transfer.	Start 3/3/97	-	-	Schedule based on completion of NEPA ROD. Anticipated completion 6/98.
DO 34	**EBS DATA SUMMARY REPORTS PHASE II A/B (Results, Referrals, & Reclassification)**					
IT, Corp.	Draft Data Summary Reports for Phase IIA	Navy responded to agency comments.	-	-	-	The Navy responded to agency comments. Will be combined with Phase IIB results/reports which are delayed (see below).
	Draft Data Summary Reports for Phase II A/B	In Progress. Navy and Agencies negotiating background issue. Management negotiating Tiered Screening.	Pending revised Final Tiered Screening document.	-	-	Pending agreement on Human Tiered Screening Approach.
	Marsh Crust Summary Report	Navy responded to general agency comments.	Original response 6/28/96, further response 12/96.	-	-	Original Navy response to comments was 6/28/96. DTSC and RWQCB requested on 8/20/96 a further response. Navy responded 12/96. No revisions anticipated.
	FOST/Transfer Property	In Progress. Basewide EBS and Human Health Risk Screening will be used to support decisions for transfer.	Start 3/3/97	-	-	Schedule based on completion of NEPA ROD. Anticipated completion 6/98.

Prepared by: Ann Klimek, EFA West; phone (415) 244-2714, fax (415) 244-2654, 3/24/97.

NAS ALAMEDA IR PROJECT STATUS

(RPM: George Kikugawa)

Site No. / Contract	Description	Status	Agency Target Date	Agency Comment Due Date	Comments
Site 22 (7C)	**REMOVAL ACTION**				
MOJU DO 1	Pre-Draft **EE/CA**	Awaiting Petroleum Cleanup Level Tech Memo recommendation	5/27/97	6/27/97	Results of the TPH evaluation indicate that TPH is not an imminent hazard and a removal action may not be required. The Navy will produce a tech memo recommending transfer and closure of this site.
Site 15	**REMOVAL ACTION**				
MOJU DO 9	Draft **Modified EE/CA**	Working to award contract	4/24/97	5/1/97	A modified EE/CA will be submitted evaluating 3 alternatives to handle Sites 15 & 16 soils.
Site 16	**REMOVAL ACTION**				
MOJU DO 1	Draft **EE/CA**	Awaiting Cleanup Alternative	4/24/97	5/1/97	Responses to DTSC comments 5/29/96. The Navy is looking into alternatives to handle Sites 15 & 16 soils.
Sites 1, 2, 5, 10 (B 400) + Storm Drains	**RADIOLOGICAL SURVEY REPORT**				
PRC CTO 22	Draft **Radiation Survey Report**	Awaiting comments on the Pre-Draft Radiation Survey Report	4/14/97	5/14/97	The Pre-Draft Radiation Survey Report was submitted 3/4/97. Comments due 31 March.
Sites 1, 2, 5, 10 and Storm Drains	**REMOVAL ACTION**				
PRC CTO 147	Draft **EE/CA Radiological Removal Action**	Awaiting negotiation and award of contract	—	—	Accelerate cleanup of buildings 5 and 400. No EE/CA (Design only) for decontamination of these buildings?

ALAMEDA NAVAL AIR STATION
IR PROJECT STATUS
(RPM: DENNIS WONG)

Site No., Contract	Description	Status	Agency Target Date	Agency Comment Due Date	COMMENTS
Site 15	**Removal Action**				
CTO-258	Draft Impl. Report-Site 15 Removal Action	Awaiting completion of soil handling.	11/28/97		Documents will be prepared to evaluate other alternatives of soil handling.
TSTA	**TSTA Construct. & Maint.**				
DO-43	Soil Stockpile Maintenance	On going.			The soil stockpile is continued to be monitored and maintained.
Site 7(7A)	**Removal Action**				
CTO-262	Site Evaluation	Awaiting Petroleum Cleanup Level Tech Memo recommendation			Results of the TPH sites evaluation indicate that TPH contamination at this site is not an imminent hazard and a removal action may not be required. The Navy will produce a tech memo recommending transfer and closure of this site.
Site 14	**Removal Action**				
DO-29	Site Evaluation	Awaiting Petroleum Cleanup Level Tech Memo recommendation			Results of the TPH sites evaluation indicate that TPH contamination at this site is not an imminent hazard and a removal action may not be required. The Navy will produce a tech memo recommending transfer and closure of this site.
Site 18	**Removal (Storm Drain Sed)**				
DO-41	Field Work	Complete			Stormdrain cleaning was completed last week. The remaining tasks are to complete demo and dispose of the remaining waste water when the permit from East Bay MUD is obtained.
	Closeout Report		6/20/97		
CTO-107	Draft Implementation Report		8/29/97		

BADCAT BAY AREA DEFENSE CONVERSION ACTION TEAM
ENVIRONMENTAL TECHNOLOGY PARTNERSHIP (ETP)

BAY AREA ECONOMIC FORUM
A Partnership of the Association of Bay Area Governments and the Bay Area Council

The Bay Area Defense Conversion Action Team (BADCAT), a program of the Bay Area Economic Forum (BAEF), was initiated in 1994 by concerned leaders and organizations in response to the adverse economic impact caused by the region's 12 base closures. BAEF is a partnership between the Association of Bay Area Governments (ABAG) and the Bay Area Council (BAC). ABAG represents over 100 cities and counties and BAC represents over 250 private businesses. BADCAT is managed by BAEF.

The BADCAT Environmental Technology Partnership Project (BADCAT ETP) is a public-private partnership of the BAEF, Bay Area Regional Technology Alliance (BARTA), California Environmental Protection Agency (CAL EPA), US Environmental Protection Agency (US EPA), US Navy, Chevron Research and Technology Company, Pacific Studies Center and other technical experts working to expedite clean-up and conversion of Bay Area closing bases through application of new environmental technologies.

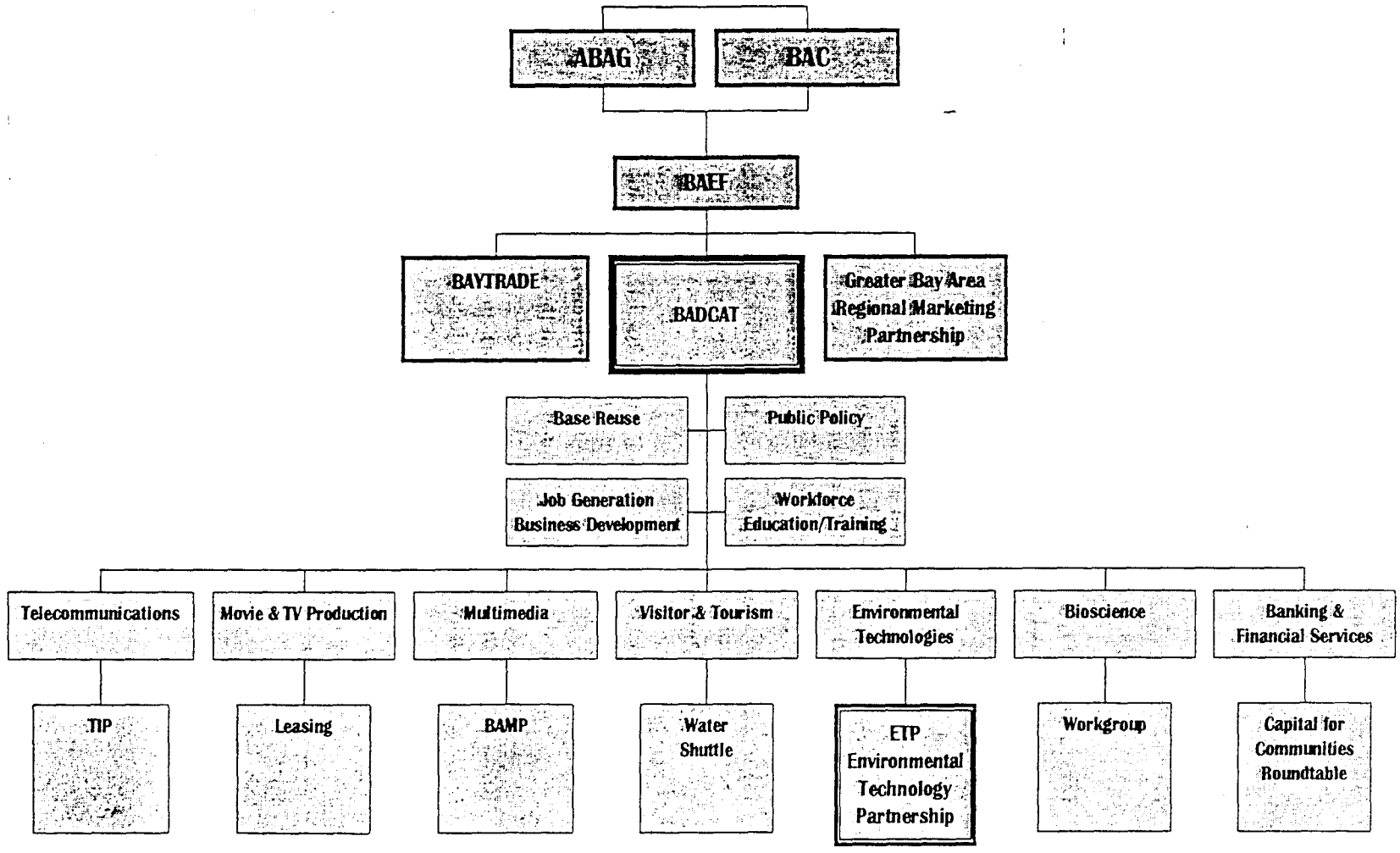
PROCESS

BADCAT ETP identified areas where new environmental technologies are needed by assessing the total contaminant mass for Bay Area Navy bases identified by CAL EPA's Military Base Contaminant Inventory Project rather than on specific sites. The Project presented a clearer picture for prioritizing clean-up needs at the regional level. The Project estimated the volumes of contaminated media and mass of individual contaminants present at several Northern California military installations and established a mass-based inventory of chemical specific contaminants present at each facility. The BADCAT ETP used this information to determine that petroleum hydrocarbons and inorganic contaminants (specifically antimony, chromium, copper, mercury and zinc) are commonly found at Navy Bay Area BRAC bases in significant volumes.

SOLICITATION

Using this data, BADCAT solicited proposals for demonstrating emerging and innovative technologies that could remediate common petroleum and metal contaminants at Bay Area bases. The solicitation produced 21 proposals from companies interested in testing environmental technologies. The PreScreen Board (composed of representatives from Bay Area Business &

Bay Area Defense Conversion Action Team
BADCAT Organizational Chart



AE/GM/ae/gm
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California
BASE CLOSURE NEWS

This article is reprinted from the February 1997 issue of the California Base Closure News

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New Environmental Technologies Showcased at Hunter's Point

Hunter's Point Naval Shipyard was announced for closure in April 1991. The property covers 522 acres and is located within the City and County of San Francisco. The Navy's operational use of the shipyard ended in 1974, with little use of the property since then. Most of the buildings on the base have deteriorated. The base is a federal Superfund site.

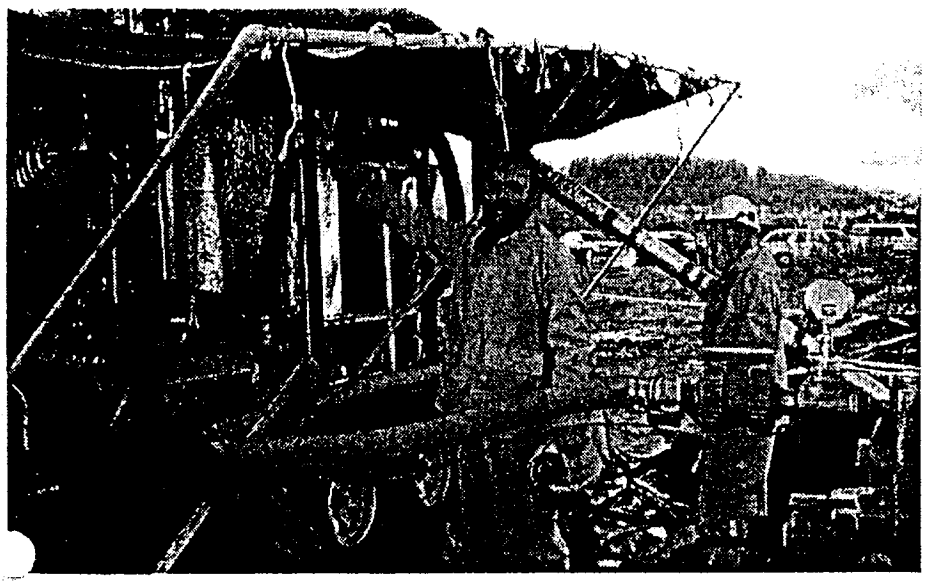
Demonstrations of two experimental technologies were held at the former Hunter's Point Naval Shipyard on January 23. Both environmental technologies aim for a "faster, better, cheaper and safer" identification and cleanup of petroleum hydrocarbons and inorganic (metal) contaminants in the soil.

Klohn-Crippen Consultants, from Vancouver, B.C., Canada, demonstrated the on-site removal of organic and inorganic soil contaminants through its ChemTech Volume Reduction Remediation Technology. The Klohn-Crippen treatment cost per ton is about $50-75, compared to the traditional haul-and-landfill method which costs $250 per ton.

OnSite Environmental Laboratories Inc., from Tempe, Arizona, demonstrated its mobile field laboratory, which provides a 15-minute soil sampling analysis at the remediation site. The laboratory uses a X-Ray Fluorescence (XRF) Detection system.

The demonstrations at Hunter's Point were the result of nearly two years of coordinated efforts undertaken by the

Michael Barber and Edmund Gee with OnSite Environmental Laboratories, Inc. stand in front of their mobile test facility. Using X-Ray Fluorescence Detection Technology, Barber and Gee can provide measurements in the field with detection limits below most risk-based action levels. Soil analysis takes fifteen minutes.



Rob Stephenson of Klohn-Crippen Consultants, Ltd. demonstrates Volume Reduction Remediation Technology at the former Hunter's Point Naval Shipyard. The technology was designed to separate metal contaminants from the soil.

Bay Area Economic Forum (BAEF), a regional business development organization. BAEF created the Bay Area Defense Conversion Action Team (BADCAT) to develop a strategy to address the economic impacts arising from the closing of 12 military bases in the Bay Area. BADCAT produced an industry cluster analysis of the regions' environmental technology industry. The analysis identified an untapped opportunity to test and validate new cleanup methods on closing military bases while simultaneously expanding an industry for which the region has a competitive advantage. BADCAT held three workshops for leaders from the Bay Area's environmental technology industries and the region's military base closure communities. The workshops

NAVY EXPLORING USE OF NEW SOIL-WASHING TECHNOLOGY FOR FASTER CLEANUPS

A newly patented soil-cleaning technique recently demonstrated at a Navy shipyard in the San Francisco Bay area has the potential for faster, cheaper and more public relations-friendly cleanups at contaminated sites across the country, a Navy source says.

The demonstration, applying volume reduction remediation, at Hunters Point at the end of January was coordinated by the Bay Area Defense Conversion Action Team (BADCAT) Environmental Technology Partnership but privately funded by the companies presenting their technologies. The demonstrations also showcased x-ray fluorescence detection (XRF), a field measurement technology already in use at some sites to analyze soil for metal contaminants, sources say.

BADCAT — a private-public partnership of regulators, technical experts and the Navy — uses ongoing cleanup needs at the bay area's 12 closing military bases to highlight and explore the use of innovative technology.

"The Navy looks at cleanup as a nationwide issue. We're looking for technology that is exportable," the Navy source says. "It's hard to find a base nationwide that doesn't have soil contamination."

Both XRF and volume reduction have the potential to save money through faster and a less costly cleanup process. "The ability to multiply those savings is pretty exciting," the source says.

XRF produces accurate results in 15 minutes, saving the time it would take to send the soil to an off-site laboratory and wait for results, the source says. However, the effectiveness of volume reduction is still being determined through scientific peer review, the source says. Results from last month's tests are expected in about three months, a second Navy source says. The technology has yet to be tested on a large, commercial scale, sources say.

If volume reduction proves effective, "we'll trade off the old [technology] for the new [technology] in a heartbeat," the Navy source says, referring to current methods of treatment and stabilization.

Volume reduction takes large amounts of soil with low concentrations of metals or hydrocarbons and concentrates the contaminants, through a process of scouring and chemical leaching, in a small amount of soil, says a source with Klohn-Crippen, the Canadian company that developed the technique.

Volume reduction can reduce the amount of contaminated soil by up to 90 percent, depending on how silty or sandy the soil is, a second Navy source says.

The first Navy source agrees that handling contaminated soil is a particularly difficult issue. Currently, "there's just not a good way to do it. A good dirt washer would be hard to beat," the source says.

Current procedures — capping, solidification, incineration or removal — all have drawbacks, the source says. The public is wary of capping because, the source says, citizens wonder, for example, if a weed can grow through a crack in their driveway, what is to stop contaminated soil from escaping through a concrete cap? Solidification is expensive, and leaves the problem of what to do with the contaminated mass. Excavating the dirt takes much time and effort and requires the dirt to be taken somewhere else. "No one wants to haul dirt" because of all the monitoring required, the source says, and "incineration on site is not popular" with surrounding communities.

If volume reduction proves effective, the Navy would distribute the results servicewide, and perhaps to the other services, through a two-page technical data sheet, the source says.

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